Building an open social learning community around a Dspace repository on Statistics

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Introduction

LORs, addressing content management and preservation, have the positive collaterals of institutional positioning and dissemination, but their main benefit is the empowerment of interest-centred learning communities, as we recognise that learning is much more than content, which becomes infrastructure: the LOR provides the learner interaction with the LOs, but also with other learners and teachers.

Learning object repository on Statistics

With Statistics being a transversal field and having courses offered at different undergraduate programmes at the Open University of Catalonia (UOC), we have accumulated a big collection of learning resources, but there are key issues with cataloguing, granularity and discoverability, to mention three of them. Our intention is to formalize that collection in an LOR, for which we have chosen DSpace, as UOC has been using it for its repository needs for some time now. One vital decision when building an LOR is deciding upon the metadata scheme. We have opted for a subset of Dublin Core over LOM, trying to eliminate every item that is not susceptible of being used for searching the repository. One of the most interesting possibilities of an LOR is that it allows establishing relationships between the different items stored in it. Therefore, learners browse a true graph of connected resources according to some upper ontologies (i.e. the application domain, Statistics in this case), instead of a simple list of learning resources, improving their global vision about the subject.

Every new learning resource is added by teachers to the DSpace repository, altogether with its metadata. Once the LO is considered to be usable by learners, it is made available and its permanent URI is published. Using the RSS functionality of DSpace, the handle of the uploaded resource is sent to a Delicious account (named “UOC_gatekeeper”, for instance) with all metadata converted to basic tags, combining human readable tags with machine readable ones. Learners do not need to use the DSpace interface for accessing the resources. They only need to create a Delicious account and become friends of the UOC_gatekeeper account, so every time a new resource is published (or modified) they receive such an event through RSS, filtered against their desired tags, if they wish. If they like a resource, they can save it to their Delicious account as any other link they might find useful, adding their own tags. On a regular basis, the UOC_gatekeeper can analyze those tags in order to send information about the most used resources, comments, etc., back to the DSpace repository.

Furthermore, a completely different user interface can be built upon the Delicious account, combining interactive browsing, tag clouds and other data visualization techniques. A demo of this system (currently it is used for creating a network of all resources related to UOC) can be found here. A similar project for interactive browsing is MACE. We expect that this visualization will help learners to better browse and search for learning resources combining competences, keywords and taxonomy hierarchical structures.

Combining DSpace with Delicious as described above is only the first step towards the construction of a true social learning community around the repository. Learners should not only be able to browse learning resources, but also to establish new relationships between them, to rate and annotate learning resources, to share their comments and questions with other learners, to become trusted evaluators of LOs for their peers and to provide both the institution and their peers with a ‘wisdom of crowds’ approach to resource quality assessment.

Current and future research in this subject should include the analysis of usage data to provide insight into the educational needs of students and to improve accordingly the process of LO creation in the future.

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